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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,638	09/09/2004	Taiichi Okada	TIP-04-1178	2464

35811 7590 10/20/2005

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EXAMINER

BEFUMO, JENNA LEIGH

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/501,638

Applicant(s)

OKADA, TAIICHI

Examiner

Jenna-Leigh Befumo

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 6-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1 – 5, in the reply filed on September 29, 2005 is acknowledged. Claims 6 – 10 are withdrawn from further consideration as being drawn to a nonelected invention.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07-252740 A (English Translation) in view of Veiga (5,989,660).

JP 07-252740A discloses a yarn for use in airbags having a total yarn size of 180 to 450 denier, made from filaments having a degree of compression of 1.5 or more and a filament size of 0.1 to 7.0 denier (constitution). The degree of compression is defined as the ratio of the major axis to the breadth, and is the same as the applicant's degree of flatness (paragraph 19). As shown in the figures, the cross section of the filament can take various shapes, including a rectangular fiber (which has a constant thickness), an elliptical fiber, and an elliptical fiber with grooves, as long as the filament has the desired degree of compression. The yarns are woven together to produce a fabric having a cover factor of 1500 – 2000 (paragraph 26).

JP 07-252740A discloses that the major axis of the single yarn should be placed parallel to the flat surface (or horizontal direction) of the fabric to decrease the gaps in the woven fabric,

Art Unit: 1771

thus suppressing air permeability, or to produce a set air permeability from a lighter fabric, when compared to a fabric made from round fiber (page 10, paragraph 18). Thus, JP 07-252740A teaches that to maximize the advantage gained by using flattened fibers, one must make the fibers parallel or as close to parallel as possible. Therefore, it would have been obvious to one having ordinary skill in the art to optimize the HI of the fabric taught by JP 07-252740 A to have a HI of greater than 0.75 to increase the air permeability of the fabric made from flattened fibers to the greatest extent or to decrease the overall weight, as well as thickness, of the fabric to the greatest extent.

Further, JP 07-252740 A discloses that the fabric can be used to make an airbag fabric with or without a resin coating. However, JP 07-252740 A fails to teach the amount of resin added to the fabric. Veiga is drawn to airbag fabrics. Veiga discloses that it is known to add a covering layer of a thermoplastic resin in an amount of 0.25 to 2.5 oz/yd, or about 8.4 to 84 g/m² (column 6, lines 50 – 55). Thus, it would have been obvious to one having ordinary skill in the art to add the coating in an amount taught by Veiga to the fabric taught by JP 07-252740 A since JP 07-252740 A discloses that the woven airbag fabric can include a resin coating. Thus, claims 1 – 3 are rejected.

With respect to claim 4, while JP 07-252740 A discloses that the thickness of the fibers are limited so that the fabric will not be too thick (paragraph 22), JP 07-252740 A fails to disclose the thickness of the fabric. However, based on the teachings of JP 07-252740 A that the fabric should be lightweight and flexible as well as using small fibers and yarns, so that the overall thickness of the fiber is limited (paragraph 22), it would have been obvious to one having ordinary skill in the art to optimize the thickness of the fabric to produce a fabric with the

Art Unit: 1771

claimed thickness. Further, It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the fabric thickness, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

With regards to claim 5, while JP 07-252740 A discloses using polyamide filaments, JP 07-252740 A fails to teach the viscosity of the polyamide material relative to sulfuric acid. However, it would have been obvious to one of ordinary skill in the art to choose the claimed viscosity since one of ordinary skill in the art would be motivated to choose a polyamide which has a viscosity such that the polymer will easily be processed during extrusion to form the desired meltspun fibers. Thus, it would only involve routine skill in the art to choose the viscosity of the polymer and it would have been obvious to one of ordinary skill in the art to optimize the viscosity of the polymer so that the extrusion process is efficient producing the continuous filaments without an excessive number of breaks during extrusion. Thus, claims 5 are also rejected.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Befumo whose telephone number is (571) 272-1472. The examiner can normally be reached on Monday - Friday (8:00 - 5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1771

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jenna-Leigh Befumo
October 17, 2005

